

to process image data according to the method as claimed in claim

A2 1.

A3 11. A computer program product comprising a set of instructions
for carrying out a method as claimed in claim 1.

REMARKS

The foregoing amendments to the claims were made solely to avoid filing the claims in the multiple dependent form so as to avoid the additional filing fee.

The claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

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APPENDIX

5. The image processing method of ~~one of Claims 1 to 4~~claim 1, wherein the estimation of left and right pedicle landmark location Candidates in each State comprises:

computing, from the spine image data, Features Values that are characteristic of thin structures;

scanning a region, called Region of Scanning, containing the pedicles, for each vertebra, along scan lines substantially parallel to the pedicle internal border lines, where the pedicle landmarks are to be localized; and accumulating Feature Values of each scan line on an axis, called X-axis that is orthogonal to the scan lines, and transforming the accumulated Feature Values into Costs, called Local Costs, measured along said X- axis, said Local Cost Values being the smallest for the highest Accumulated Values;

performing a search for the left and right pedicle landmark location Candidates among the points of said X-axis associated to the smallest Local Costs.

7. The image processing method of ~~one of Claims 5 or 6~~claim 5, wherein the determination of the Region of Scanning comprises:

selecting an image of a current vertebra delimited by lines joining its corner landmarks;

estimating the median axis of the vertebra sides and the angle between said axis and a reference horizontal axis of the 2-D spine frontal image;

rotating the image of said current vertebra by said angle and defining an horizontal axis, which is the X-axis corresponding to said current vertebra; and limiting the rotated image by the leftmost and the rightmost projections of the vertebra corner landmarks on said X-axis, thus defining a rectangular image region used as Region of Scanning.

8. The image processing method of ~~one of Claims 5 to 7~~claim 5, wherein the Feature Values are the ridgeness values estimated in the Region of Scanning.

9. A system comprising a suitably programmed computer or a special purpose processor having circuit means, which are arranged to process image data according to the method as claimed in ~~any one of the preceding Claims~~claim 1.

11. A computer program product comprising a set of instructions for carrying out a method as claimed in ~~one of Claims 1 to 8~~claim 1.